SEQUENCE LISTING

SEQ ID NO:1

human CNG3B amino acid sequence

5

MFKSLTKVNKVKPIGENNENEQSSRRNEEGSHPSNQSQQTTAQEENKGEEKSLKTKSTPVTS
EEPHTNIQDKLSKKNSSGDLTTNPDPQNAAEPTGTVPEQKEMDPGKEGPNSPQNKPPAAPVI
NEYADAQLHNLVKRMRQRTALYKKKLVEGDLSSPEASPQTAKPTAVPPVKESDDKPTEHYYR
LLWFKVKKMPLTEYLKRIKLPNSIDSYTDRLYLLWLLLVTLAYNWNCWFIPLRLVFPYQTAD
NIHYWLIADIICDIIYLYDMLFIQPRLQFVRGGDIIVDSNELRKHYRTSTKFQLDVASIIPF

10

DICYLFFGFNPMFRANRMLKYTSFFEFNHHLESIMDKAYIYRVIRTTGYLLFILHINACVYY
WASNYEGIGTTRWVYDGEGNEYLRCYYWAVRTLITIGGLPEPQTLFEIVFQLLNFFSGVFVF
SSLIGQMRDVIGAATANQNYFRACMDDTIAYMNNYSIPKLVQKRVRTWYEYTWDSQRMLDES
DLLKTLPTTVQLALAIDVNFSIISKVDLFKGCDTQMIYDMLLRLKSVLYLPGDFVCKKGEIG
KEMYIIKHGEVQVLGGPDGTKVLVTLKAGSVFGEISLLAAGGGNRRTANVVAHGFANLLTLD

15

KKTLQEILVHYPDSERILMKKARVLLKQKAKTAEATPPRKDLALLFPPKEETPKLFKTLLGG
TGKASLARLLKLKREQAAQKKENSEGGEEEGKENEDKQKENEDKQKENEDKGKENEDKDKGR
EPEEKPLDRPECTASPIAVEEEPHSVRRTVLPRGTSRQSLIISMAPSAEGGEEVLTIEVKEK
AKQ

20

SEQ ID NO:2

complete human CNG3B nucleotide sequence

25

CATTTCTCTACCTTAAGGCACAGTCATAAATACAGAGGGTTTTCAGAACCACCTCAGAGAAGATG
TTTAAATCGCTGACAAAAGTCAACAAGGTGAAGCCTATAGGAGAGAACAATGAGAATGAACAAAG
TTCTCGTCGGAATGAAGAAGGCTCTCACCCAAGTAATCAGTCTCAGCAAACCACAGCACAGGAAG
AAAACAAAGGTGAAGAGAAATCTCTCAAAACCAAGTCAACTCCAGTCACGTCTGAAGAGCCACAC
ACCAACATACAAGACAAACTCTCCAAGAAAAATTCCTCTGGAGATCTGACCACAAACCCTGACCC
TCAAAATGCAGCAGAACCAACTGGAACAGTGCCAGAGCAGAAGGAAATGGACCCCGGGAAAGAAG

30

GTCCAAACAGCCCACAAAACAAACCGCCTGCAGCTCCTGTTATAAATGAGTATGCCGATGCCCAG
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AGATCTCCTCACCCGAAGCCAGCCCACAAACTGCAAAGCCCACGGCTGTACCACCAGTAAAAG
AAAGCGATGATAAGCCAACAGAACATTACTACAGGCTGTTGTGGTTCAAAGTCAAAAAGATGCCT
TTAACAGAGTACTTAAAGCGAATTAAACTTCCAAACAGCATAGATTCATACACAGATCGACTCTA

35

TCTCCTGTGGCTCTTGCTTGTCACTCTTGCCTATAACTGGAACTGCTGGTTTATACCACTGCGCC
TCGTCTTCCCATATCAAACCGCAGACAACATACACTACTGGCTTATTGCGGACATCATATGTGAT
ATCATCTACCTTTATGATATGCTATTTATCCAGCCCAGACTCCAGTTTGTAAGAGGAGGAGACAT
AATAGTGGATTCAAATGAGCTAAGGAAACACTACAGGACTTCTACAAAATTTCAGTTGGATGTCG
CATCAATAATACCATTTGATATTTGCTACCTCTTCTTTGGGTTTAATCCAATGTTTAGAGCAAAT

40

AGGATGTTAAAGTACACTTCATTTTTTGAATTTAATCATCACCTAGAGTCTATAATGGACAAAGC
ATATATCTACAGAGTTATTCGAACAACTGGATACTTGCTGTTTATTCTGCACATTAATGCCTGTG
TTTATTACTGGGCTTCAAACTATGAAGGAATTGGCACTACTAGATGGGTGTATGATGGGGAAGGA
AACGAGTATCTGAGATGTTATTATTGGGCAGTTCGAACTTTAATTACCATTGGTGGCCTTCCAGA
ACCACAAACTTTATTTGAAATTGTTTTTCAACTCTTGAATTTTTTTTCTGGAGTTTTTGTGTTCT

45

CCAGTTTAATTGGTCAGATGAGAGATGTGATTGGAGCAGCTACAGCCAATCAGAACTACTTCCGC
GCCTGCATGGATGACACCATTGCCTACATGAACAATTACTCCATTCCTAAACTTGTGCAAAAGCG
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CAAAGAAAAGGCTAAGCAATAAATGTTTGATTATCTTTAGATGTGATATAGCTAGTTCCCAAAGT
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GAAAGGCAAATCCCTAGCTTAGTTTCTAGGACTTATCTGAGAGTGTGATTTCATGCAGTGGTAAT
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SEQ ID NO:3

human CNG3B coding sequence

ATGTTTAAATCGCTGACAAAAGTCAACAAGGTGAAGCCTATAGGAGAGAACAATGAGAATGAACA
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CACACCAACATACAAGACAAACTCTCCAAGAAAAATTCCTCTGGAGATCTGACCACAAACCCTGA
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AAGGTCCAAACAGCCCACAAAACAAACCGCCTGCAGCTCCTGTTATAAATGAGTATGCCGATGCC
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CCTTTAACAGAGTACTTAAAGCGAATTAAACTTCCAAACAGCATAGATTCATACACAGATCGACT
CTATCTCCTGTGGCTCTTGCTTGTCACTCTTGCCTATAACTGGAACTGCTGGTTTATACCACTGC
GCCTCGTCTTCCCATATCAAACCGCAGACAACATACACTACTGGCTTATTGCGGACATCATATGT
GATATCATCTACCTTTATGATATGCTATTTATCCAGCCCAGACTCCAGTTTGTAAGAGGAGGAGA
CATAATAGTGGATTCAAATGAGCTAAGGAAACACTACAGGACTTCTACAAAATTTCAGTTGGATG
TCGCATCAATAATACCATTTGATATTTGCTACCTCTTCTTTGGGTTTAATCCAATGTTTAGAGCA
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CGCGCCTGCATGGATGACACCATTGCCTACATGAACAATTACTCCATTCCTAAACTTGTGCAAAA
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GCTGGGTCGGTGTTTGGAGAAATCAGCCTTCTAGCAGCAGGAGGAGGAAACCGTCGAACTGCCAA
TGTGGTGGCCCACGGGTTTGCCAATCTTTTAACTCTAGACAAAAAGACCCTCCAAGAAATTCTAG
TGCATTATCCAGATTCTGAAAGGATCCTCATGAAGAAAGCCAGAGTGCTTTTAAAGCAGAAGGCT

AAGACCGCAGAAGCAACCCCTCCAAGAAAGATCTTGCCCTCCTCTTCCCACCGAAAGAAGAGAC
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5   TGAAGATAAAGATAAAGGAAGAGAGCCAGAAGAGAAGCCACTGGACAGACCTGAATGTACAGCAA
GTCCTATTGCAGTGGAGGAAGAACCCCACTCAGTTAGAAGGACAGTTTTACCCAGAGGGACTTCT
CGTCAATCACTCATTATCAGCATGGCTCCTTCTGCTGAGGGCGGAGAAGAGGTTCTTACTATTGA
AGTCAAAGAAAGGCTAAGCAATAA

10

SEQ ID NO:4

Oligo 1 (sense strand primer)

TCTATCTCCTGTGGCTCTTGCTTGTC

15

SEQ ID NO:5

Oligo 2 (antisense strand primer)

20   GAGTCTGGGCTGGATAAATAGCATATC

SEQ ID NO:6

Oligo 3 (sense strand primer)

25

AGGAATTGGCACTACTAGATGGGTG

SEQ ID NO:7

30   Oligo 4 (antisense strand primer)

TTCATGAGGATCCTTTCAGAATCTGG

35   **SEQ ID NO:8**

Oligo 5 (sense strand primer)

GGAAACCGTCGAACTGCCAATGTGGT

5   **SEQ ID NO:9**

Oligo 6 (sense strand primer)

CGGGTTTGCCAATCTTTTAACTCTAGAC

10

SEQ ID NO:10

Oligo 7 (antisense strand primer)

GTCCGCAATAAGCCAGTAGTGTATG

15

SEQ ID NO:11

Oligo 8 (sense strand primer)

20   TGACAAGCTTCCGCCATGTTTAAATCGCTGACAAAAGTC

SEQ ID NO:12

Oligo 9 (antisense strand primer)

25

TGACGAATTCTCCCAGCATGTCGTTTCCCCTCGTTAA